

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-15 are presently pending in this application, Claims 1-7 having been amended and Claims 8-15 having been newly added by the present amendment.

In the outstanding Office Action, Claims 2, 3 and 7 were rejected under 35 U.S.C. §112, second paragraph, for being indefinite; and Claims 1-7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Doi et al. (U.S. Patent 6,190,455) in view of the admitted prior art and Subramanian et al. (U.S. Patent 6,270,579).

With regard to the rejection under 35 U.S.C. §112, second paragraph, Claims 1-7 have been amended solely to clarify the subject matter recited therein. Thus, the pending claims are not believed to raise a question of new matter and are believed to be in compliance with the requirements of the statute. Also, these claim amendments are not believed to narrow the scopes of the claims. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

In addition, Claims 8-15 have been newly added herein. These new claims are believed to find support in the specification, claims and drawings as originally filed. For example, Claims 8-15 are believed to be supported similar to Claims 1-7. Hence, no new matter is believed to be added thereby.

Briefly, amended Claim 1 of the present invention is directed to a finely-divided powder spray apparatus including a spray nozzle pipe configured to discharge finely-divided powders from a tip portion thereof together with a gas flow onto a member to be sprayed, and a moving-speed control device configured to control a moving-speed of the tip portion of the spray nozzle pipe based on a density distribution function indicating a density of the finely-

divided powders deposited at each spray point on the surface of the member in a trial spray. By providing such a moving-speed control device, the finely-divided powders are sprayed with excellent uniformity, regardless of the size of the member to be sprayed.¹

Doi et al. disclose a finely-divided powder spray apparatus. Nevertheless, Doi et al. do not teach “a moving-speed control device configured to *control a moving-speed of the tip portion of said spray nozzle pipe based on a density distribution function* indicating a density of the finely-divided powders deposited at each spray point on the surface of said member in a trial spray” as recited in amended Claim 1 (emphasis added in Italic). On the other hand, Doi et al. merely disclose the spray system 90 in which the moving speed can be varied by changing a parameter through the touch panel 96.² Thus, the structure recited in Claim 1 is believed to be distinguishable from Doi et al..

Subramanian et al. disclose a nozzle arm movement system. However, Subramanian et al. do not teach “a moving-speed control device configured to *control a moving-speed of the tip portion of said spray nozzle pipe based on a density distribution function* indicating a density of the finely-divided powders deposited at each spray point on the surface of said member in a trial spray” as recited in amended Claim 1 (emphasis added in Italic). Instead, Subramanian et al. disclose the processor 64 that *compares* the measured thickness uniformity with the desired thickness uniformity, and determines whether or not *the reconfiguration of the path and the adjustment of the spraying volume* are necessary.³ In the Subramanian apparatus, the function indicating the distribution of the density of the sprayed material is not obtained, and thus no real-time control based on such a function at each spray point is performed. As such, the Subramanian apparatus is not believed to provide layers of

¹ See Specification, Fig. 11, and page 22, lines 1-11.

² See Doi et al., column 13, lines 24-43.

³ See Subramanian et al., column 9, lines 30-41.

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optimal thickness uniformity. Therefore, the structure recited in Claim 1 is clearly distinguishable from Subramanian et al.

Because neither Doi et al. nor Subramanian et al. disclose the moving-speed control device as recited in Claim 1, even the combined teachings of these cited references would not in any way render the structure recited in Claim 1 obvious.

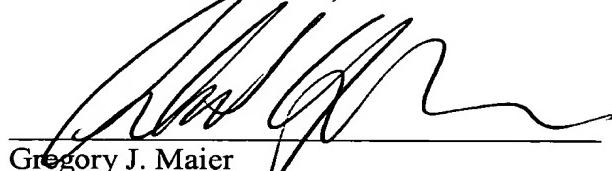
Similarly, Claims 8 and 15 are believed to include subject matter substantially similar to what is recited in Claim 1 to the extent discussed above. Thus, Claims 8 and 15 are also believed to be distinguishable from both Doi et al. and Subramanian et al.

For the foregoing reasons, Claims 1, 8 and 15 are believed to be allowable. Furthermore, since Claims 2-7 and 9-14 depend ultimately from either Claim 1 or 8, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2-7 and 9-14 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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